

## **REMARKS**

In response to the above-identified Office Action (“Action”), Applicant traverses the Examiner’s rejection of the claims and seeks reconsideration thereof. Claims 1-14 are pending in the present application. Claims 1-14 are rejected. In this response, claim 1 is amended, no claims are cancelled and no claims are added.

### **I. Claim Amendments**

Applicant respectfully submits herewith amendments to claim 1. Claim 1 is amended to recite that “an electric wire within a tube, wherein the wire is received in an electrically insulating material, such that the various strands of the wire are separated from one another by said electrically insulating material; and a ceramic sheath including a woven layer, wherein the sheath surrounds an assembly formed by the wire and the electrically insulating material and is interposed between the assembly and the tube.” The amendments to claim 1 are supported at least by, for example, page 4, lines 6-7, lines 10-11, lines 21-22 and lines 27-33, and by Fig. 2 of the Application.

The amendments do not add new matter and are supported by the specification. Accordingly, Applicant respectfully requests consideration and entry of the amendments to claim 1.

### **II. Claim Rejections - 35 U.S.C. §103**

In the outstanding Action, claims 1-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,934,831 issued to Volbrecht (“Volbrecht”) in view of U.S. Patent No. 5,183,079 issued to Blin (“Blin”). Applicant respectfully traverses the rejection.

To establish a *prima facie* case of obviousness, the Examiner must set forth “some articulated reasoning with some rational underpinning to support the conclusion of obviousness.” See KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007). In combining prior art elements to render the claimed combination of elements obvious, the Examiner must show that the results would have been predictable to one of ordinary skill in the art. See Examination

*Guidelines for Determining Obviousness Under 35 U.S.C. 103*, Section III(D), issued by the U.S. Patent and Trademark Office on October 10, 2007.

In regard to independent claim 1, Applicant respectfully submits that Volbrecht and Blin fail to disclose or render predictable a heater resistance for heating a solid part including at least the elements of “an electric wire within a tube, wherein the wire is received in an electrically insulating material, such that the various strands of the wire are separated from one another by said electrically insulating material” and “a ceramic sheath including a woven layer, wherein the sheath surrounds an assembly formed by the wire and the electrically insulating material and is interposed between the assembly and the tube” as recited in amended claim 1.

Volbrecht discloses a temperature sensor for measuring temperature, not a heating resistance. Accordingly, one of ordinary skill in the art would not understand the teachings of Volbrecht to be instructive as to the manufacturing of a heater resistance as claimed.

In particular, the temperature sensor disclosed in Volbrecht comprises wires made of lead. Lead wires are not resistance wires adapted for providing heat through Joule effect as is required by the wires of claim 1.

Further, the electrical wires of Volbrecht are welded together and also welded to the interior face of the external tube (see Fig. 1, and the passages from col. 2, line 65 to col. 3, line 1 and col. 4, lines 8-9). As a result, the wires and the tube of Volbrecht are all at the same potential. This is not acceptable for a heating cable mounted on metallic body sensors where an electrical insulation between the wires and the tube is requested and mandatory.

Accordingly, for at least the foregoing reasons, the device in Volbrecht may not be operated as heater resistance as claimed.

Moreover, the structure of the device proposed by Volbrecht does not include each of the features of the heater resistance of claim 1. In particular, the device of Volbrecht comprises an electric wire within a tube and a single ceramic insulation surrounding the wire and thus interposed between the wire and the tube.

As admitted by the Examiner, Volbrecht does not disclose an additional ceramic sheath which includes a woven layer, and which is further specifically positioned such that it is interposed between the tube and the assembly formed by the wire and the first insulating material.

Moreover, the braid disclosed by Volbrecht is a stainless steel mesh, which includes only mechanical functions for wire protection. Accordingly, the braid does not serve an insulating function as is the case with the ceramic sheath including a woven layer as recited in claim 1.

It is noted that the particular arrangement of the heater resistance of claim 1 includes providing a woven ceramic sheath around the insulated wires. This configuration serves to avoid dielectric breakdown that may occur between the wires and the external protection tube while the resistance is being deformed in order to be shaped and installed (see page 2, lines 3-11 and page 7, lines 14-17).

The device proposed in Volbrecht, which includes a crushed ceramic insulation, already avoids dielectric breakdown when the device is being bent, as stated in col. 4, lines 46-51. Accordingly, upon review of Volbrecht, the person skilled in the art would not have contemplated modifying the structure of the device to include protection when the device is bent as said device is already foreseen for such protection.

Further, providing a second insulating element in the device of Volbrecht makes the manufacturing of the device much more complex. Accordingly, one of ordinary skill in the art would not understand to modify Volbrecht to include such features as alleged by the Examiner, especially since such second insulating element is useless because of the crushed ceramic insulation.

Blin may further not be combined with Volbrecht to cure the deficiencies of Volbrecht with respect to a heater resistance including a ceramic sheath including a woven layer as claimed.

As an initial matter, Blin is non-analogous art to that of Volbrecht. In particular, Blin relates to a very different technical field, namely, a heat and fire resistant protective covering for hoses or cables.

The particular covering which is described in Blin may comprise a ceramic woven layer for the purpose of imprisoning air which contributes to the protection of the hose or cable against heat and fire.

The ceramic woven layer of Blin has thus nothing to do with maintaining cohesion of the device when being shaped, in particular to avoid dielectric breakdown, as is the case with the heat resistance of claim 1. There is thus absolutely no reason for the person skilled in the art to specifically use a ceramic woven layer as disclosed in Blin in the device of Volbrecht.

Even if it were possible to combine the references, and Applicant does not believe this is the case, one skilled in the art would not have looked for a solution in Blin for increasing the cohesion of the crushed ceramic insulation of Volbrecht in order to avoid dielectric breakdown when bending the device. Rather, if anything, one skilled in the art would have contemplated using the compression sleeve of the prior art, which is a woven cloth of material (see col. 1, lines 35-38), not a ceramic woven layer.

Applicant further notes that in regard to the structural differences with regard to the insulation as mentioned above, the combination of the teachings of Volbrecht and Blin does not lead to a heater resistance for heating a solid part, as the device resulting from such combination would comprise electrical wires remaining in contact with the external tube at the hot junction.

Accordingly, for at least the foregoing reasons, the teachings of Volbrecht and Blin may not be combined to disclose each and every element of claim 1. Since each of the elements of claim 1 are not found within the prior art, a *prima facie* case of obviousness may not be established. Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §103 over Volbrecht and Blin.

In regard to dependent claims 2-14, these claims depend from claim 1 and incorporate the limitations thereof. Thus, for at least the reasons that claim 1 is not *prima facie* obvious over Volbrecht and Blin, claims 2-14 are further not obvious. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 2-14 under 35 U.S.C. §103 over Volbrecht and Blin.

### **CONCLUSION**

In view of the foregoing, it is believed that all claims now pending, namely claims 1-14, are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.


### **PETITION FOR EXTENSION OF TIME**

Per 37 C.F.R. 1.136(a) and in connection with the Office Action mailed on MAY 12, 2009, Applicant respectfully petitions Commissioner for a two (2) month extension of time, extending the period for response to OCTOBER 12, 2009. The amount of \$490.00 to cover the petition filing fee for a 37 C.F.R. 1.17(a)(1) large entity will be charged to our Deposit Account No. 02-2666.

Respectfully submitted,

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#### **CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being submitted electronically via EFS Web to the United States Patent and Trademark Office on October 12, 2009.

  
Si Vuong